

IN THE CLAIMS:

1. **(Original)** A method for evoking and measuring response signals in a human patient, comprising:

providing a plurality of discrete stimulus signals to the human patient in a predetermined encoded sequence, each of said discrete stimulus signals selected to evoke at least one desired response signal in the human patient;

acquiring unfiltered signals from the human patient, said acquired unfiltered response signals including signal noise; and

utilizing said predetermined encoded sequence to extract said desired response signals from said acquired unfiltered response signals.

2. **(Original)** The method of Claim 1 for evoking and measuring response signals wherein each of said discrete stimulus signals are auditory signals.

3. **(Original)** The method of Claim 1 for evoking and measuring response signals wherein each of said discrete stimulus signals are visual signals.

4. **(Original)** The method of Claim 1 for evoking and measuring response signals wherein said predetermined sequence is encoded in a redundant encoding format.

5. **(Original)** The method of Claim 1 for evoking and measuring response signals wherein said predetermined sequence is encoded in a Hadamard encoding format.

6. **(Original)** The method of Claim 1 for evoking and measuring response signals wherein said at least one desired response signal is an auditory evoked signal.

7. **(Original)** The method of Claim 6 for evoking and measuring response signals wherein said at least one desired response signal is an auditory brainstem response signal.

8. **(Original)** The method of Claim 6 for evoking and measuring response signals wherein said at least one desired response signal is an otoacoustic auditory emission.

9. **(Original)** The method of Claim 1 for evoking and measuring response signals wherein said at least one desired response signal is a visually evoked bio-potential signal.

10. **(Original)** The method of Claim 1 for evoking and measuring response signals wherein said at least one desired response signal is a tactile evoked bio-potential signal.

11. **(Currently Amended)** A medical testing device for evoking and measuring response signals in a human patient, comprising:

a processing means, said processing means configured with a software application to generate at least one predetermined sequence of stimuli signals for evoking a response in a human patient;

a signal transmission means operatively coupled to said processing means, said signal transmission means configured to transmit said at least one sequence of stimuli signals to the human patient;

a signal receiving means operative operatively coupled to said processing means, said signal receiving means configured to receive at least one unfiltered response signal from said human patient; and

wherein said processing means is further configure configured with a software application to process said received unfiltered response signal to extract a sequence of evoked response signals associated with said at least one predetermined sequence of stimuli signals.

12. **(Original)** The medical testing device of Claim 11 wherein said signal transmission means is a microphone.

13. **(Original)** The medical testing device of Claim 11 wherein said signal transmission means is a light source.

14. **(Original)** The medical testing device of Claim 11 wherein said signal receiving means includes at least one microphone.

15. **(Original)** The medical testing device of Claim 11 wherein said signal receiving means includes at least one electrode.

16. **(Original)** The medical testing device of Claim 11 wherein said predetermined sequence of stimuli signals is an encoded sequence.